



THE LAKE DAVIS UPDATE

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Thank You!

The California Department of Fish and Game and the U.S. Forest Service would like to thank the local community and each of you who participated in the Lake Davis Pike Eradication Project for your time, concerns and patience.

We recognize that this project has been a cooperative effort between members of the public, the City of Portola, County of

Plumas, and all the involved agencies - and we appreciate everyone's involvement.

We look forward to continuing to work with the community to re-establish Lake Davis as a World Class trout fishery.

Please feel free to call Randy Kelly, DFG Project Manager, at (559) 903-3814 with any questions or concerns. Or contact Lori Wood, USFS Project Manager at (530) 836-7171.

Lake Davis Trout Restocking Celebration



Mark your calendars for the Lake Davis Trout Restocking Celebration on May 16th and 17th.

Thousands of large Eagle Lake rainbow trout

will be planted into Lake Davis on Friday, May 16th. In addition to the thousands of catchable and subcatchables that will be stocked, 3,000 trophy trout ranging from 6 to 10-plus pounds will be released. Fish with \$10 reward tags

(used to determine the catch rate) will also be deposited into the reservoir. Representatives from DFG and U.S. Forest Service, along with City of Portola and Plumas County officials, will make short presentations.

Saturday's event, geared to anglers and the public, will start at 10:30 a.m. at Coot Bay along Lake Davis' east shore. A free fishing clinic, informational booths, and children's activities with Smokey the Bear will be part of the fun.

It's also expected there will be lots of fishing going on. Don't miss your opportunity to catch a big one!

See the enclosed insert for more details.

Early Opener

Come bring your family to Plumas County and enjoy the early fishing opener on the Middle Fork Feather River! From the Union Pacific Railroad Bridge in Sierra Valley (1/4 mile upstream of the County A-23 Bridge) down to the Mohawk Bridge in Blairsden, the Middle Fork Feather River is open this year from April 5th through November 15th.

Trout Limit

The limit at Lake Davis is 5 trout, with 10 in possession per person. Lake Davis is open year-round to fishing. The tributaries flowing into Lake Davis are open to fishing this year from April 26th through November 15th. Anglers 16 years old and over must have a valid California fishing license in their possession.

Know the Law!

It is a crime to introduce pike or any other invasive species into waters in California, punishable by a maximum penalty of \$50,000 and up to a year in jail. Violators are liable to pay damages caused to property, sport and commercial fisheries, and local communities who depend on those fisheries. In addition, anyone providing information leading to the arrest and conviction of a person who unlawfully places or plants, or causes to be placed or planted, in any of the waters of the State, any live fish, any fresh or salt water animal, or any aquatic plant, is eligible for a reward of up to \$50,000.

Help us maintain Lake Davis as a world class trout fishery. Please report any illegal activity to Cal-TIP at 888-334-2258.

Chemical Treatment Completed

The chemical treatment phase of the Lake Davis Pike Eradication Project was completed in September 2007. The piscicide CFT Legumine™, approved for use by the CA Dept. of Pesticide Regulation, was used for this project. A piscicide is a chemical substance which is lethal to fish. The chemical treatment had 3 components: 1) stream treatments, 2) reservoir treatment, and 3) neutralization of the piscicide.



The streams were treated twice. The first stream treatment occurred during the week of September 10th. The second stream treatment coincided with the reservoir chemical treatment the week of September 24th. Both stream treatments used 5-gallon drip stations to apply piscicide to flowing water over a 6-hour period. At the same time, DFG crews, using backpack sprayers and trailer-mounted spray rigs, applied piscicide to isolated standing water and backwater areas in the streams.

The chemical treatment of the reservoir began on September 25th, allowing the stream and lake treatment to overlap to ensure complete coverage. About 25 boats, including three air boats, began applying piscicide to the reservoir at 7:30 in the morning. The project area had been divided into one-quarter mile grids. Boats were assigned a series of grids and loaded with the amount of piscicide needed for

their assigned grids. The air boats were used to apply piscicide to shallow areas around the reservoir and areas of dense aquatic vegetation along the edges of Lake Davis. Global Positioning System (GPS) units tracked the progress of each stream and boat crew.

To prevent the piscicide from going into Big Grizzly Creek below the dam, the release valve from the dam was closed. Below the dam, springs and incoming groundwater helped feed the creek and provide sufficient water habitat for fish and other aquatic life in lower Big Grizzly Creek. The small amount of seepage from the dam was collected and returned to the reservoir. Neutralization of the piscicide constituents in the reservoir occurred naturally. The process took longer than anticipated due to the breakdown times of some of the dispersants in the new formulation CFT Legumine™. The longest lasting compound was Fennedefo 99 - a compound also used in food products such as chewing gum, Dr. Pepper® and some vitamins. The Fennedefo 99 in the CFT Legumine™ was at a lower concentration than what is used in foodstuffs.



Complete neutralization of the lake water was confirmed with the water sample collected on January 22, 2008. The results were verified by Lawrence Livermore National Laboratory on February 1, 2008. Normal flows to Big Grizzly Creek below the dam commenced on February 11, 2008.

Dead Fish Clean-up

DFG crews collected dead fish from around the perimeter of the reservoir and put them in large plastic bags. Fish were also picked up by boat crews from the surface of Lake Davis.

About 5% of the dead fish were set-aside for identification by species, and

counted. Trout and northern pike were measured and weighed. Estimates of the total number of dead fish collected were made. The dead fish were stored in a refrigerated truck and later taken to a landfill in Washoe County for disposal.

Over 48,900 lbs. of dead fish were



removed from the reservoir following the treatment. By number, about 6% were northern pike, 82% brown bullhead, 10% pumpkinseed sunfish, and 2% golden shiner. Less than 1% of the fish collected were rainbow trout or largemouth bass. Many of the dead fish were relatively small fish. While the bulk (68%) of the pike were small (5 ½ to 8 ½ inches), the remaining pike were much larger and contributed a disproportionate amount to the total dead fish biomass. The largest pike measured in the collected sample was 46 inches long, and was estimated to weigh between 25 and 30 lbs. Based on the sampling, DFG calculated by weight that northern pike accounted for about 21% (10,493 pounds) of the dead fish collected.

Air Quality Monitoring

As part of the project, DFG requested that the California Air Resources Board install monitors at several sites around Lake Davis prior to the chemical treatment of the reservoir to detect any rotenone, methyl pyrrolidone, or other compounds that disperse (volatilize) into air. In addition, staff from the Northern Sierra Air Quality Management District were on-site during the reservoir treatment to address any concerns. No odor complaints were received and the monitors did not detect any rotenone or methyl pyrrolidone. Low levels of naphthalene were detected. However, the values were far less than levels typically seen in urban areas and several orders of magnitude below chronic exposure levels.



Were We Successful?

DFG and the Forest Service believe the September 2007 application of the piscicide CFT Legumine™ eliminated northern pike from Lake Davis and all tributary streams. This was, in large part, due to detailed project planning.

Area maps and aerial photographs were used to create a detailed map of the project area. The tributary streams and the reservoir were divided into ¼ mile grids and a comprehensive atlas of every section of the project area was produced. This grid system allowed DFG to calculate the volume of water in each grid and determine how much piscicide to apply to each reservoir grid. For three years prior to project implementation, all grids that included tributary streams were checked so at the time of stream treatment, DFG knew the location of all water in the basin. 2007 was a drought year (27% of normal precipitation), which reduced the miles of stream that had to be chemically treated.

There were five stream treatment teams who trained on-site prior to the treatment. Handheld GPS units tracked daily movement of both stream and reservoir applications. This data was downloaded and mapped at the

end of each work day so that it could be reviewed by team leaders the following morning. If there were questions about whether a targeted area had been visited by a piscicide applicator, the area was checked the following day.

Each stream was chemically treated twice to improve the likelihood of success. The second stream treatment coincided with the reservoir treatment. To confirm the effectiveness of the chemical treatment, live rainbow trout were placed in cages at strategic locations along each of the tributary streams as sentinel fish. Since it takes a higher concentration of rotenone to kill a trout than a pike, the effectiveness of the piscicide application could be determined. Live trout were also placed in cages at 14 locations around Lake Davis and at varying depths prior to the reservoir chemical treatment. Trout were checked two days after the completion of the project and all were dead. This indicated that the piscicide concentrations in the streams and reservoir were maintained at a sufficient level to kill northern pike.

The streams and reservoir were sampled post-treatment to determine if northern pike were present. Tributary

streams were electrofished and no fish were found. The reservoir was sampled using boat mounted electrofishers for about three weeks and only brown bullhead, pumpkinseed, golden shiners, and one large mouth bass were found. These species are more tolerant to the piscicide than pike, and it was anticipated that some would survive the treatment.

In addition, 30 gill nets were placed around the reservoir during October and November 2007, and only a few brown bullheads were netted. No northern pike or rainbow trout were found during the monitoring. Monitoring of the fish population in the reservoir and tributary streams will continue in 2008 and beyond.

At this time, it is impossible to know for certain if the pike were successfully eliminated from Lake Davis. Only time will tell if we were successful. However, it is highly likely the goals of this project were realized based on the level of project planning, use of new technological tools, coordination and cooperation with federal, state, and local agencies and the local community, and a lot of hard work by everyone involved.

Forest Service Update

On January 18, 2008, Plumas National Forest rescinded Forest Order 13-07, and opened up access to Lake Davis and the land adjacent to the reservoir. The roads around the perimeter of the reservoir were opened on November 14, 2007. The Forest Service would like to thank everyone for their patience and cooperation throughout the past months in dealing with the closure and the Lake Davis Pike Eradication Project as a whole.

The entire Lake Davis Recreation Area is now open for recreational activities. While the campgrounds are not open yet, they will be open once the snow melts. Currently hiking, snow-shoeing, and ice fishing are available. Please come out and enjoy the area.

The Forest Service will remain

a constant presence at Lake Davis and is committed to continuing to improve the recreational opportunities of the area. Over the next year, the Plumas National Forest has several projects planned in the area. They include:

New docks: This spring, new docks will be placed at Honker Cove, Lightning Tree, and Mallard Cove access points.

Toilets: New toilets will be placed at the Freeman Creek and Fairview Fishing Access Point – one at each location.

Trails: A Resource Advisory Committee (RAC) grant has been secured to begin work on 5.1 miles of trail construction on the south-eastern portion of the lake.

Road work: This spring, the Forest Service will be graveling and

improving the driving and parking surfaces at Coot Bay and Mallard Cove.

This fall, in cooperation with the Department of Boating and Waterways, improvements will be made to the Honker Cove Launch Area including widening and extending the ramp. Measures are also being looked at that would reduce the sediment build-up in the Cove. In addition, parking at Camp 5 will be expanded. And look for new picnic tables being planned for several locations around the lake.

Questions and comments relating to the Forest Service activities in the Lake Davis area can be directed to the Beckwourth Ranger District, Plumas National Forest. They can be reached at (530) 836-2575.

February Open House

About 45 members of the public and a dozen agency staff braved snow and ice to attend the Project Update Open House on February 2, 2008. There was a slide show of what occurred during the treatment. Dr. Dave Spath, California Department of Public Health, reported that water quality sampling now shows that the reservoir water is below detection levels of the chemicals used in the rotenone treatment. At the time of the Open House, one sediment sampling site showed a decreasing amount of rotenone slightly above the detection level. Dr. Spath also reported that, based on the results of the fish tissue samples, none of the chemical compounds used bioaccumulated in the fish. After the presentations, those attending engaged in discussions with agency staff during the Open House.



**Don't miss the
Lake Davis Trout
Restocking
Celebration
May 17th!
11 tons of trophy
trout will be
stocked !!!
Free Fishing Day
& Portola Rotary
Fishing Derby
June 7th
See the enclosed flyer
for details**

Economic Workgroup

As part of the Lake Davis Pike Eradication Project, DFG hired a forensic accountant to collect economic data from willing individuals, businesses, and other entities in Portola. DFG also hired a real estate appraiser to collect local real estate data both before and after the treatment, and to analyze the data in comparison to other similar markets to determine whether, or to what extent, the Project affected real property values. The economic data collected by the forensic accountant and the real estate appraiser will be summarized in a report and given to the State Legislature. The Legislature can use this information in deciding on actions they may consider to address any short-term financial impacts the Project may have had on local Portola area individuals, businesses, and other entities.

The Lake Davis Economic Workgroup, which consists of 4 local business people, was formed as an offshoot of the Lake Davis Steering Committee to provide input to DFG regarding this effort. The mission of the Workgroup is: "To provide a coordinated and collaborative effort between DFG and the local community regarding the collection of information about the potential economic impact of the Lake Davis Pike Eradication Project." The group also assists DFG with ideas for post-treatment activities to publicize the return of Lake Davis to a World Class Trout Fishery.

The next Economic Workgroup meeting is April 21st at Portola City Hall beginning at 10:00 a.m.

**Department of Fish and Game
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